

ABSTRACT OF THE DISCLOSURE

An extendable wing system for a fluid-born body has a forward wing and an aft wing pivotably coupled together at a location outward of their wing roots. A linkage mechanism mounted on the body provides both pivoting of the wing roots about a pivot point and translation of the wing roots and their pivot points to extend the joined wings from a stowed position to a deployed position. Translation of the forward wing root pivot point allows the stowed wing system to occupy additional space toward the nose of the body, thereby allowing use of wings having a longer wingspan and greater aspect ratio. The linkage mechanism can also be used to incorporate flight control, such as roll and pitch control, directly into the wing system. In another embodiment, the wings can incorporate actuator elements on or within the wings to effect flight control by deformation of the wing structure.

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